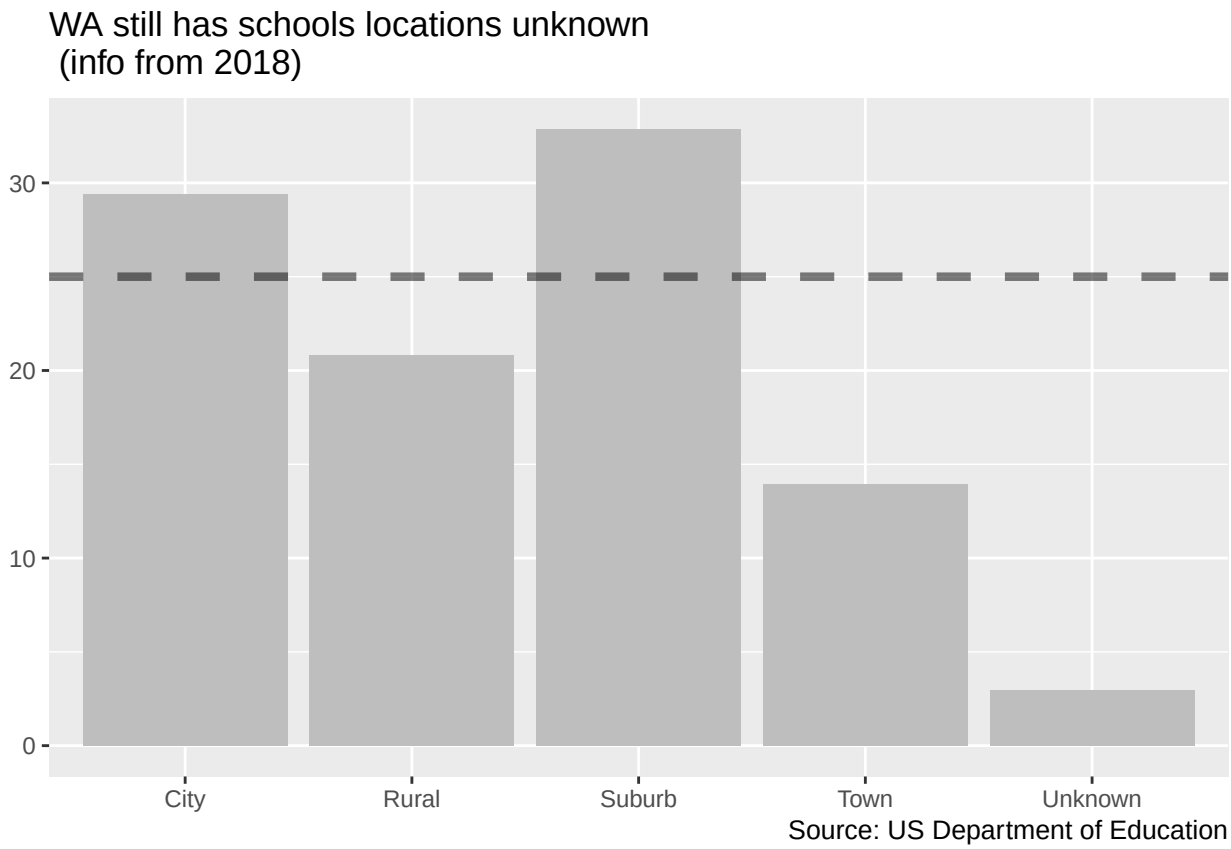
Course: Visual Analytics for Policy and Management

David Coomes, Univariate Exercises

- Add the reference lines:

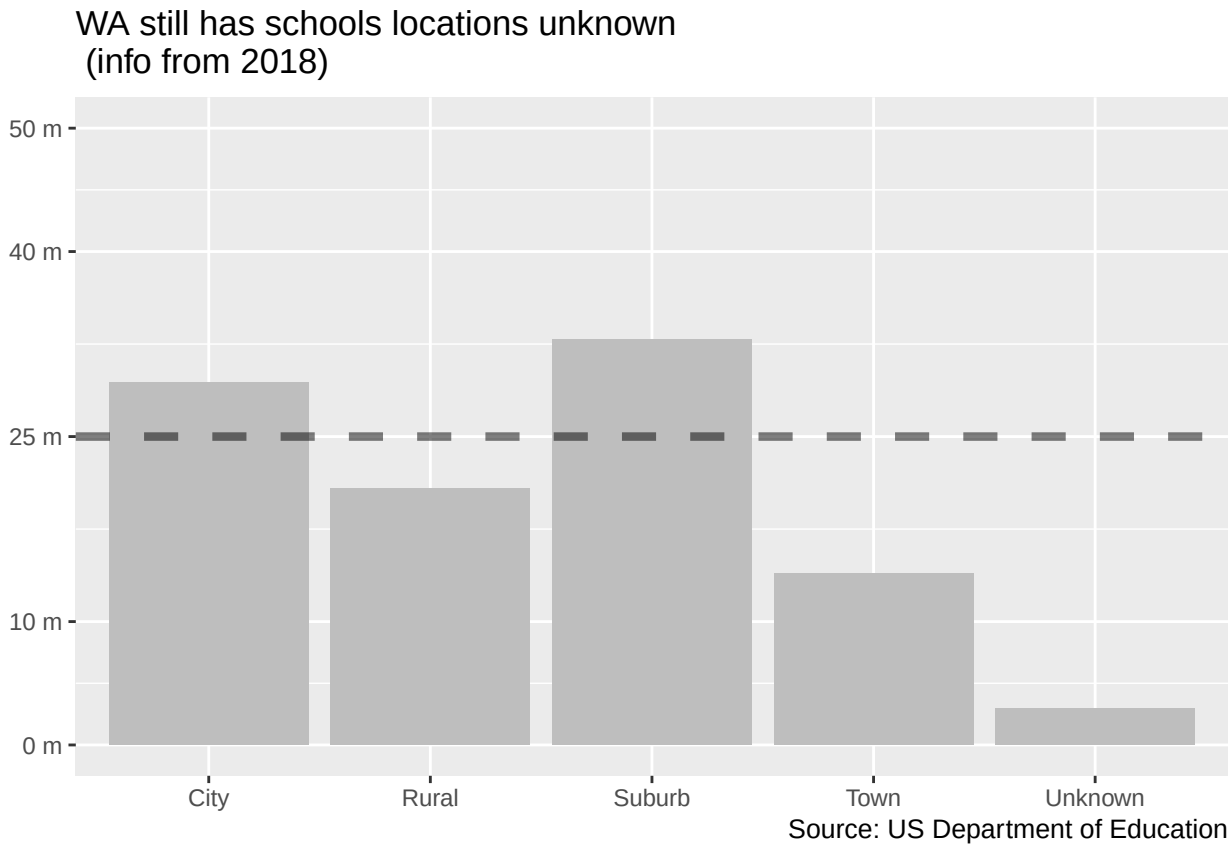
```
plot3 = plot2 + geom_hline(yintercept = 25, #where
                           linetype="dashed",
                           size=1.5, #thickness
                           alpha=0.5) #transparency
plot3
```



- Customize the axes:

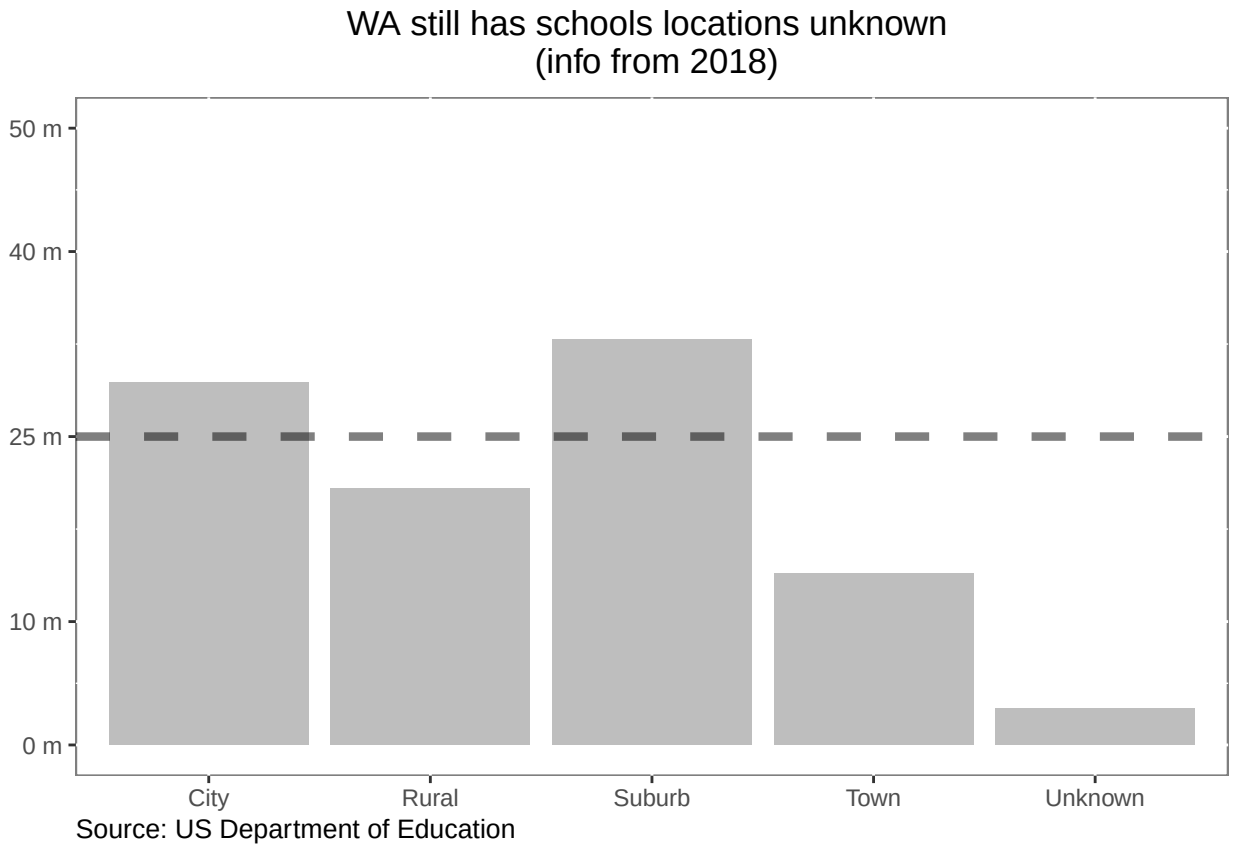
```
library(scales)

# customize Y axis
plot4 = plot3 + scale_y_continuous(breaks=c(0,10, 25,40,50),
                                   limits = c(0, 50), # expand = c(0, 0),
                                   labels=scales::unit_format(suffix = '%'))
plot4
```



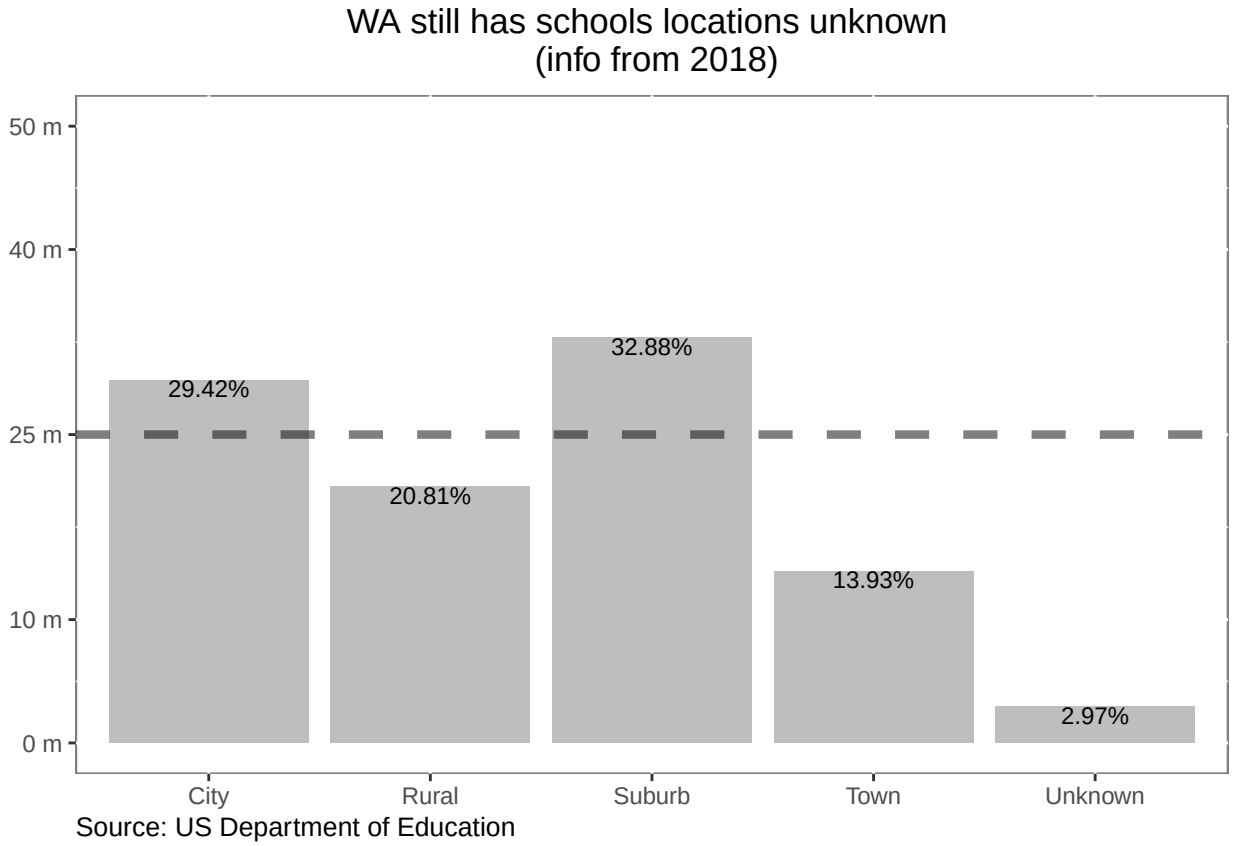
- Less ink and title/subtitle positions:

```
plot5 = plot4 + theme(panel.background = element_rect(fill = "white",
                                                      colour = "grey50"),
                      plot.caption = element_text(hjust = 0), # default was 1
                      plot.title = element_text(hjust = 0.5))
plot5
```



- annotating the bars:

```
plot6 = plot5 + geom_text(aes(
                            y = pct ,
                            label = paste0(round(pct,2), '%')),
                          vjust=1, # if flipping 'hjust'
                          size = 3)
# wanna flip the plot?
plot6 #+ coord_flip()
```

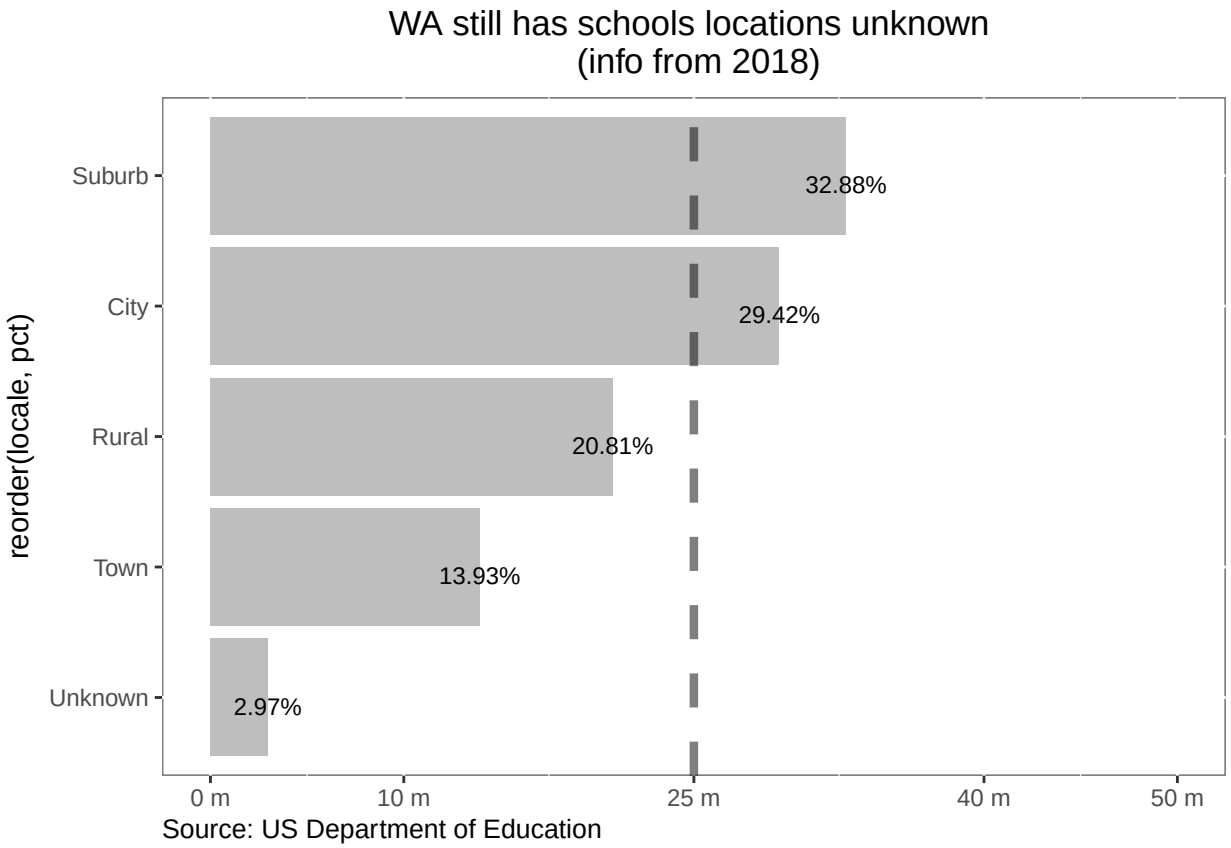


The plot above simply change the order of the *table*. If you want to do the same with *ggplot* you should try the command:

```
tableFreq[order(-tableFreq$pct),]
```

```
plot7=plot6 + coord_flip() + aes(x=reorder(locale, pct))

plot7
```


WA still has schools locations unknown
(info from 2018)
reorder(locale, pct)
Suburb
City
Rural
Town
Unknown
32.88%
29.42%
20.81%
13.93%
2.97%
0 m
10 m
25 m
40 m
50 m
Source: US Department of Education